AMENDMENTS TO THE CLAIMS

1-15 (*cancelled*)

16. (*original*) A magnesium-zirconium master alloy containing dissolved zirconium and zirconium particles in the substantial absence of halide inclusions, wherein 90% of the zirconium particles are sized less than 5μm.

17. (*previously presented*) A magnesium-zirconium master alloy as claimed in claim 16 wherein 90% of the zirconium particles are sized less than 3 μm.

18-19. (*cancelled*)

20. (*currently amended*) A magnesium alloy containing zirconium prepared by mixing a magnesium-zirconium master alloy as claimed in claim ~~16~~ **26** with the molten magnesium/magnesium alloy.

21. (*previously presented*) A magnesium-zirconium master alloy as claimed in claim 16 containing 10-50% by weight zirconium.

22. (*previously presented*) A magnesium-zirconium master alloy as claimed in claim 16 containing 20-40% by weight zirconium.

23. (*cancelled*)

24. (*currently amended*) A magnesium-zirconium master alloy as claimed in claim ~~23~~ **26** wherein **the surface layer of** fluorine containing compounds ~~are~~ **comprises** zirconium fluoride compounds.

25. (*previously presented*) A magnesium-zirconium master alloy as claimed in claim 24 wherein the zirconium fluoride compounds have the formula $Zr_xF_y \cdot nH_2O$ and x, y and n are integers.

26. (*new*) A magnesium-zirconium master alloy, prepared by a method comprising:

(a) contacting an agglomerate of porous zirconium sponge particles with a source of fluoride ions to form treated zirconium sponge particles comprising an agglomerate of porous zirconium particles having a surface layer of fluorine-containing compounds at least partially coating a portion of the zirconium particles;

(b) contacting the treated zirconium sponge particles with a molten magnesium/magnesium alloy at a temperature sufficient to disintegrate the zirconium sponge particles in the molten magnesium/magnesium alloy to form a magnesium-zirconium melt, wherein the zirconium particles in the magnesium-zirconium melt are substantially evenly distributed and suspended in the magnesium-zirconium melt;

(c) casting the magnesium-zirconium melt in a mold to form the magnesium-zirconium master alloy.

27. (*new*) The method of claim 26, wherein the zirconium sponge particles have the following properties:

i) an average particle size between 0.1-10 mm;

ii) density of 5.2-6.3 g/cm^3;

iii) porosity of 0.08-0.2.

28. (*new*) The method of claim 26, wherein the contacting of the treated zirconium sponge particles with the molten magnesium/magnesium alloy is done by stirring.

29. (*new*) The method of claim 26, wherein the magnesium-zirconium master alloy contains 10-50 % by weight zirconium.

30. (*new*) The method of claim 26, wherein the magnesium-zirconium master alloy is cast in the form of ingots.

31. (*new*) The method of claim 26, wherein the amount of zirconium added to the molten magnesium/magnesium alloy is greater than that required to saturate the magnesium/magnesium alloy with zirconium at the temperature of the melt.

32. (*new*) The method of claim 26, wherein the magnesium-zirconium master alloy has a substantial absence of halide inclusions.

33. (*new*) The method of claim 26, wherein the untreated agglomerate of porous zirconium particles vary in size from about 0.1-10 mm.

34. (*new*) The method of claim 26, wherein the treated zirconium sponge particles vary in size from about 1-3 mm.

35. (*new*) The method of claim 26, wherein 90 % of the zirconium particles in the magnesium-zirconium melt are less than 5 μm in size.

36. (*new*) A magnesium-zirconium master alloy as claimed in claim 16, wherein the zirconium particles are substantially evenly distributed and suspended in the master alloy.